CLAIMS

I Claim:

1. A lip rolling system for rolling lips about the open mouths of stacked thermoplastic containers, the system comprising:

a supply line of nested thermoplastic containers;

a screw assembly positioned to receive the nested thermoplastic containers;

a mechanism for directing the nested thermoplastic containers toward the screw assembly; and

a heat source having an initial position to direct a supply of heated air at the containers as they are engaged by the screw assembly.

2. The lip rolling system of Claim 1, wherein the screw assembly is removable.

3. The lip rolling system of Claim 1, wherein the screw assembly is affixed to a removable plate.

4. The lip rolling system of Claim 3, wherein the screw assembly comprises at least one screw curling.

5. The lip rolling system of Claim 4, wherein the screw assembly further comprises at least one chrome roller.

6. The lip rolling system of Claim 1, wherein the screw assembly is permanently affixed to a plate in an arrangement specific to a single container size.

7. The lip rolling system of Claim 1, wherein the heat source is capable of being moved from the initial position to a safety position.

8. The lip rolling system of Claim 7, wherein the heat source is moved from the initial position to a safety position automatically in response to a signal.

9. The lip rolling system of Claim 8, wherein the signal is generated in response to a temperature sensor.

10. The lip rolling system of Claim 8, wherein the signal is generated in response to a system error.

11. The lip rolling system of Claim 1, further comprising a mechanism for diverting the supply of heated air from the containers.

12. The lip rolling system of Claim 11, wherein the mechanism for diverting the supply of heated air comprises an adjustable plenum.

13. The lip rolling system of Claim 11, wherein the mechanism for diverting the supply of heated air comprises a cylinder for removing the heat source from the initial position.

14. The lip rolling system of Claim 1, wherein the heat source is removable from the initial position.

15. The lip rolling system of Claim 1, further comprising a reciprocating mechanism attached to the heat source, wherein the reciprocating mechanism moves the heat source between the initial position and a safety position.

16. The lip rolling system of Claim 1, further comprising stabilizers positioned adjacent the screw assembly.

17. The lip rolling system of Claim 1, wherein the mechanism for directing the nested containers comprises a bristled brush.

18. The lip rolling system of Claim 1, wherein the mechanism for directing the nested containers comprises an air jet.

19. The lip rolling system of Claim 1, wherein the mechanism for directing the nested containers comprises an inclined surface utilizing gravity feed.

20. The lip rolling system of Claim 1, wherein the heated air is at a temperature within the range of from about 400° to about 1,200° F.

21. The lip rolling system of Claim 20, wherein the heated air is at a temperature within the range of from about 550° to about 600° F.

22. The lip rolling system of Claim 1, wherein the screw assembly comprises from 1 to 5 curling screws.

23. The lip rolling system of Claim 22, wherein the curling screws are positionally fixed about an opening through which the containers pass.

24. A heating system for a lip rolling machine comprising:

a heat source set at an initial position and having a housing with an open exit end directed toward a container area;

an air source coupled to the heat source; and

wherein a supply of air from the air source is communicated to the heat source and heated to a temperature before being discharged from the exit end toward the container area.

25. The heating system of Claim 24, wherein the heat source is capable of being removed from the initial position to a safety position.

26. The heating system of Claim 25, wherein the heat source is removed from the initial position to a safety position automatically in response to a signal.

27. The heating system of Claim 26, wherein the signal is generated in response to a temperature sensor.

28. The heating system of Claim 26, wherein the signal is generated in response to a system error.

29. The heating system of Claim 24, further comprising a mechanism for diverting the heated air from the container area.

30. The heating system of Claim 29, wherein the mechanism for diverting the supply of heated air comprises an adjustable plenum.

31. The heating system of Claim 29, wherein the mechanism for diverting the supply of heated air comprises a cylinder for removing the heat source from the initial position.

32. The heating system of Claim 24, wherein the heat source is removable from the initial position.

33. The heating system of Claim 24, further comprising a reciprocating mechanism attached to the heat source, wherein the reciprocating mechanism moves the heat source between the initial position and a safety position.

34. The heating system of Claim 24, further comprising a mechanism for directing nested containers through the heat source.

35. The heating system of Claim 34, wherein the mechanism for directing nested containers comprises a bristled brush.

36. The heating system of Claim 34, wherein the mechanism for directing nested containers comprises an air jet.

37. The heating system of Claim 34, wherein the mechanism for directing nested containers comprises an inclined surface utilizing gravity feed.

38. The heating system of Claim 24, wherein the heated air is at a temperature within the range of from about 400° to about 1,200° F.

39. The heating system of Claim 38, wherein the heated air is at a temperature within the range of from about 550° to about 600° F.

40. The heating system of Claim 24, further comprising a screw assembly for rolling lips of nested containers.

41. The heating system of Claim 40, wherein the screw assembly is positionally fixed about an opening through which the containers pass.